

## **ALUMINUM FLEXIBLE CHIMNEY LINER**



## **INSTALLATION INSTRUCTIONS**

### **AND GAS VENT CONNECTOR**

**IT IS OF THE UTMOST IMPORTANCE THAT  
THIS CHIMNEY LINER BE INSTALLED ONLY IN  
ACCORDANCE WITH THESE INSTRUCTIONS**



**CAN/ULC - S635, UL 1777**

**PLEASE READ ALL INSTRUCTIONS BEFORE  
BEGINNING YOUR INSTALLATION. FAILURE TO  
INSTALL THIS SYSTEM IN ACCORDANCE WITH THESE  
INSTRUCTIONS WILL VOID THE CONDITIONS OF  
CERTIFICATION AND THE MANUFACTURERS  
WARRANTY. KEEP THESE INSTRUCTIONS IN A SAFE  
PLACE FOR FUTURE USE.**

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## **For Installation into Masonry Chimneys**

READ INSTRUCTIONS CAREFULLY BEFORE STARTING THE PROJECT. REMEMBER THAT SAFETY COMES FIRST. OUR MODEL AFCL CHIMNEY LINER SYSTEM IS DESIGNED FOR INSTALLATION BY A QUALIFIED PERSON IN ACCORDANCE WITH LOCAL BUILDING CODES.

### **IMPORTANT**

**YOUR AFCL CHIMNEY LINER HAS BEEN TESTED, AND LISTED USING ALL THE SUPPORTS, SECTIONS, ETC., DESCRIBED HEREIN. DELETION OR MODIFICATION OF ANY OF THE REQUIRED PARTS OR MATERIALS MAY SERIOUSLY IMPAIR THE SAFETY OF YOUR INSTALLATION, AND VOID THE CONDITIONS OF CERTIFICATION AND/OR WARRANTY OF YOUR LINER.**

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## 1.0 TYPES OF APPLIANCE

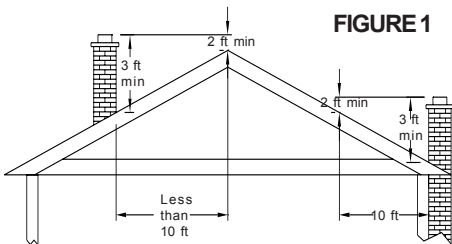
Your Model AFCL Chimney Liner is designed for use for existing masonry or listed factory-built chimneys and vents as a chimney liner for Category 1 Listed gas fired appliances equipped with draft hoods and other gas appliances listed for use with Type "B" Gas Vent which burn natural gas or propane.

## PRE- INSTALLATION GUIDELINES

### 2.0 SIZES, LOCATION & CLEARANCES

**.1** Ensure your installation will conform with all federal and municipal building code requirements. Before commencing installation, CONTACT LOCAL GAS UTILITY, LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION IN YOUR AREA. Obtain any necessary building permits.

**.2** Authorities require that the masonry chimney extend not less than three feet above the highest point where it passes through the roof of a building and not less than two feet above any portion of the building within ten feet. (See FIGURE 1.)



**.3** Close attention should be given to determine the correct connector size. Be sure to choose a size of liner that is not less than that specified in the appliance manufacturer's instructions. Vent size recommendations are detailed in the Selkirk Gas Vent and Chimney Sizing Handbook, and/or the CAN/CSA-B149.100 in Canada, or the National Fuel Gas Code NFPA-54 in the USA. As per the above Fuel Gas Codes,

all flexible metallic chimney liners are to be sized using Type "B" Gas Vent sizing tables with maximum capacities reduced by 20%.

**.4** Consult the appliance manufacturers installation instructions regarding the maximum venting run allowed.

**.5** Your liner has been listed for installation at zero clearance to the inside masonry surface of an existing masonry or factory built chimney and with zero clearance between the outside surface of the masonry chimney and surrounding combustibles.

**.6** Do not fill the air space between the liner and chimney with loose fill insulation or cement.

**.7** Model AFCL Aluminum Flexible Liner and Selkirk Type "B" Gas Vent may be used in any combination desired, to complete the system.

**.8** When used as a Vent Connector, install with 1" (25mm) minimum airspace clearance to combustibles.

**.9** At no time should an exposed portion of Model AFCL Flexible Chimney Liner be enclosed or pass through any combustible area or materials such as walls, ceilings, floors, roofs, attics, crawl spaces or joist areas as this product is not Listed as Type "B" Gas Vent.

## 3.0 LINER COMPONENTS

Parts available for liner installation:

25' Flexible Chimney Liner Kit  
35' Flexible Chimney Liner Kit  
Kits include applicable length of Flexible Liner, Support/Flashing assembly, Round Top, Mortar Guard, screws and Installation Instructions.

Additional parts available:  
Guide Cone (Pull-down)  
Flex Connector

- Outlet Coupler (USA)
- Inlet Coupler (USA)
- Draft Hood Connector (CDA)
- Reverse Draft Hood Connector (CDA)

## 4.0 TOOLS AND MATERIALS

The following tools and materials are needed:

- Safety Gloves
- Eye protection
- Ladder or scaffolding to reach the roof
- Masonry drill bit 1/2" or 3/8".
- High speed drill bit 1/8".
- Drill
- Hacksaw
- Screwdriver
- Hammer
- Pliers
- Cold chisel
- Tin Snips
- Caulking, exterior grade
- Small bag of mortar mix
- Trowel
- Mortar pan
- Piece of rope 10 feet longer than the chimney.

**CAUTION:** Always wear gloves and eye protection during installation to avoid personal injury.

## 5.0 CHIMNEY INSPECTION AND CLEANING

Make sure the masonry chimney is sound in construction, clean and free from all loose and potentially flammable debris. If you find any cracked, loose or missing bricks or tiles, have them repaired or replaced.

Before the installation of the liner, it is recommended that the chimney be cleaned by a certified chimney sweep.

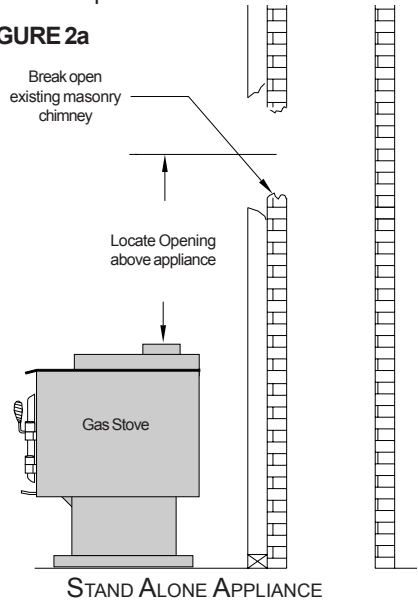
Since chimneys are usually very sooty and dusty, it is advisable to remove or cover your furniture, rugs etc. for the duration of the cleaning and installation of the liner.

## 6.0 CHIMNEY PREPARATION

### .1 PREPARING FOR A STAND ALONE APPLIANCE INSTALLATION

If no opening currently exists, determine the location of the point where the vent system will penetrate the masonry wall and prepare an opening through the masonry and any existing clay liner (with a masonry drill bit, cold chisel and hammer) large enough to accommodate the Mortar Guard, allowing for the Flex Liner to exit the chimney opening. The opening must be located above the appliance outlet as high as possible to maximize connector rise yet maintain the proper clearances (see **FIGURE 2a**). It is recommended to install an inspection/cleanout door on the opposite side if conditions permit.

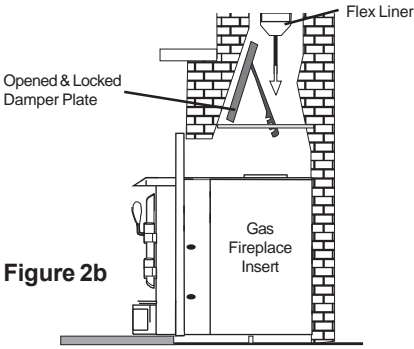
**FIGURE 2a**



### .1.1 PREPARING FOR AN INSERT

Before installing the venting system ensure that the damper plate is locked into the open position and secured or removed to prevent any damage to the liner (see **FIGURE 2b**).

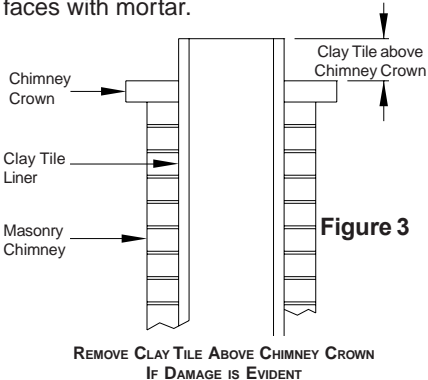
Note: Due to possible snagging which may result in some surface damage, caution must be observed when lowering Liner lengths into the masonry flue.



**Figure 2b**

## .2 PREPARING TOP OF CHIMNEY

Your chimney may have a clay-tile liner which protrudes above the brick chimney. There is no need to remove the top portion of the clay tile liner if it is in good condition. You may want at this time to do any repairs to the chimney crown if any cracks or deterioration is showing. Once the repairs are done follow section 9.0 for flashing/support installation. If on the other hand the clay tile liner is not in good condition, you will need to make it flush by chipping away at the excess with a hammer, and cold chisel (see **FIGURE 3**). Make sure that pieces of the clay tile liner don't fall into the flue. When you have finished making the top of the chimney flush, fill in any cracks and uneven surfaces with mortar.



**Figure 3**

## 7.0 LINER PREPARATION

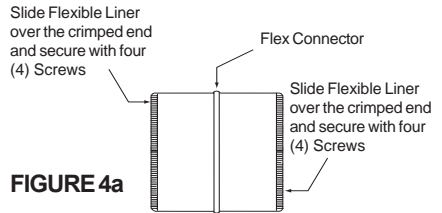
### .1 DETERMINING LINER LENGTH

Determine the required length of the liner by measuring the distance from the prepared opening to the top of the chimney allowing for a 90 degree bend at the inlet. If the flexible liner will extend

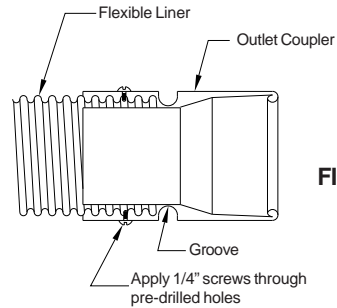
directly to the appliance, add the distance from the appliance exhaust collar to the prepared opening in the chimney flue, allowing for any required bends. Multiple lengths may be joined using the Flex Connector (CDA) or the Inlet and Outlet couplers (USA) (see **FIGURE 4a, 4b & 4c**).

### .2 TRIMMING THE LINER

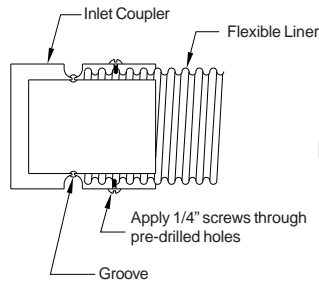
Select the length(s) necessary to accommodate the required distance determined above. Stretch the Flexible Liner to the desired length (requires 2 people) by placing both hands around the circumference of the ends of the liner and gently pulling. If any Flexible Liner requires cutting, use a sharp fine toothed hacksaw.



**FIGURE 4a**



**FIGURE 4b**



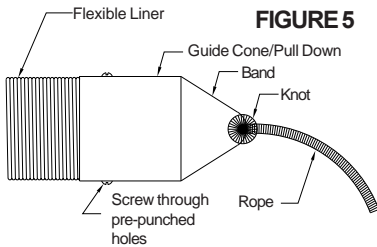
**FIGURE 4c**

**CAUTION:** Do not attach the Flex Connector or Coupler(s) and then stretch the liner by pulling on the Couplers. This may result in damage to the Flexible Liner.

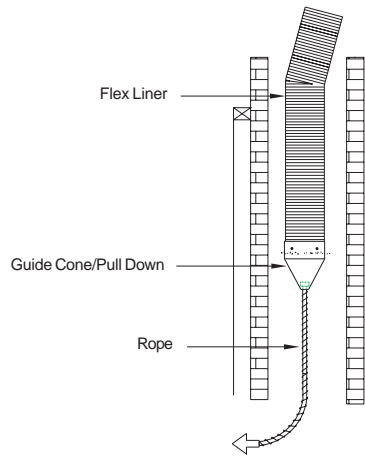
### .3 GUIDE CONE (PULL-DOWN)

#### ASSEMBLY

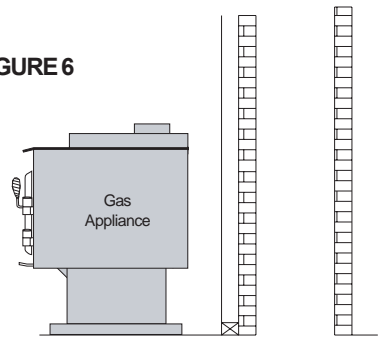
A Guide Cone (Pull-Down) is available as an optional installation aide. When attached to a rope, it is used to pull and guide the end of the Flexible Liner through the chimney. With one end of the rope, simply tie a knot around the band of the Guide Cone. Attach the Guide Cone to the flex by sliding it over the Flexible Liner and inserting screws through the pre-punched holes (see **FIGURE 5**). Once the Flexible Liner has been lowered in its final position, remove the Guide Cone.



**FIGURE 5**



**FIGURE 6**



## 8.0 INSTALLING THE LINER

### .1 Stand Alone Appliance

Gather all necessary component parts and locate them near the termination of the chimney. This should consist of a Support/Flashing assembly, a Round Top, and the prepared length of Flexible Liner complete with Guide Cone and rope. Feed the Guide Cone and rope down the chimney flue (see Figure 6). While an assistant gently pulls on the rope from below, start lowering the Flexible Liner down into the chimney flue. If additional lengths of flex are required, join the sections together as the Flexible Liner progresses down the chimney.

Note: Due to possible snagging which may result in some surface damage, caution must be observed when lowering Liner lengths into the masonry flue.

After feeding the liner down the chimney to the bottom, form a 90 degree bend and bring the Flex Liner through the prepared opening of the chimney wall (see **FIGURE 6**).

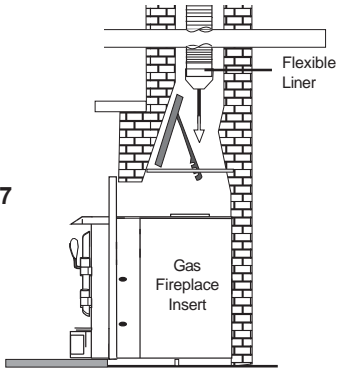
If the liner is to extend directly to the appliance, continue to pull through the required amount of liner to allow a proper connection to the appliance exhaust collar. Any portion of liner used as a connector in a nearly horizontal orientation should include a minimum slope of 1/4" per foot upward from the appliance toward the chimney.

### .2 Gas Fireplace Insert

Follow Section 7.0 for Liner Preparation and Guide Cone assembly. Feed the liner down the chimney until it exit through the masonry fireplace opening (see **FIGURE 7**). Most gas fireplace insert are equipped with a removable draffhood for easy flex to insert connection. Check the insert manufacturer's instructions for correct connection. Remove the Guide Cone from the Flex Liner. Attach the Flex Liner over the collar of the gas fireplace insert (check

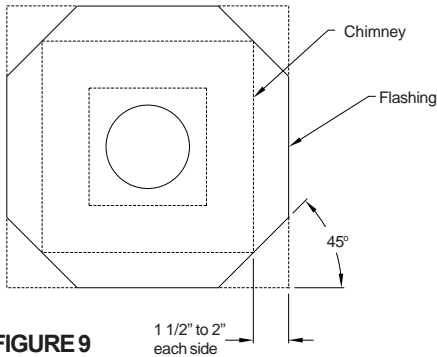
the appliance manufacturer's instructions for proper attachment). Once the insert is in its proper place, pull the excess Flex Liner from the top of the chimney.

**FIGURE 7**



## 9.0 FLASHING/SUPPORT INSTALLATION - MASONRY CHIMNEY

Position the Flashing and center the flat plate on top of the clay tile. Mark the outline of the clay tile on the underside of the flashing plate. There should be a minimum of 2" (50mm) overhang on each side of the clay tile. Cut off each corner at 45° (see figure 9) and bend over the excess at the marked line using a pair of hand folders.

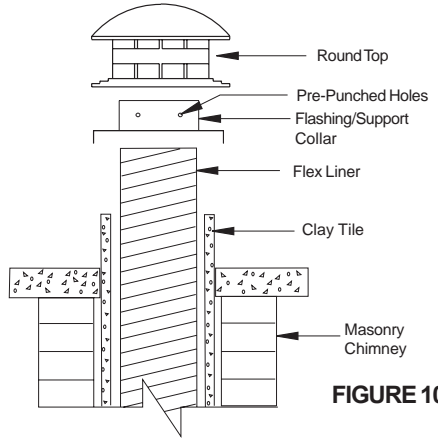


**FIGURE 9**

## 10.0 ROUND TOP INSTALLATION - MASONRY

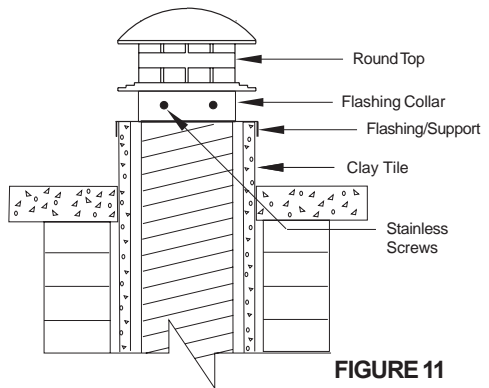
Pull enough of the Flexible Liner through the Flashing/Support assembly to be able to slide the Round Top into the Flexible Liner (see FIGURE 10 & 11).

Slide the Round Top and Liner back through the Flashing/Support assembly until the skirt of the Round Top comes in contact with the collar of the Flashing/Support assembly. Install the four (4) 3/4" sheet metal screws (provided) through the pre-punched holes in the Flashing collar (see Figure 10).



**FIGURE 10**

Place a wide bead of high temperature silicone along the entire top surface of the clay tile. Slide the Flex and Flashing assembly back into the chimney opening until the flashing plate comes to rest on the clay tile. Press the flashing firmly into the silicone to create a good seal (see FIGURE 11).



**FIGURE 11**

# 10.1 ROUND TOP INSTALLATION - Factory-Built Chimney

Two methods are offered for the installation of AFCL Flexible Liner in an existing factory-built chimney.

## METHOD A Flex Liner Kit w/ Liner Round Top

1. Remove existing chimney top and discard.
2. Center the Flashing/Support on the factory-built chimney. Mark the outline of the factory-built chimney on the underside of the Flashing/Support plate (see Ill. 1). The flashing is then trimmed flush with the outline, and secured in place with the top with sheet metal screws once it is siliconed in place as per step 6.

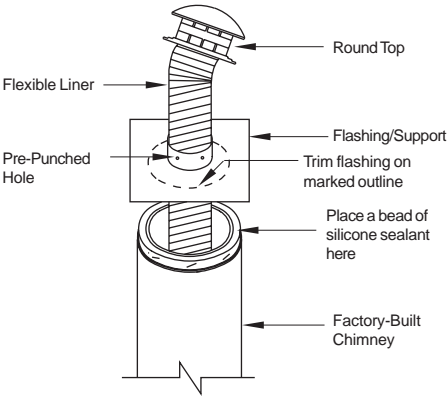


Illustration 1

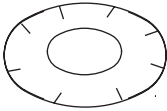
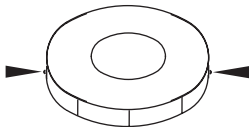


Illustration 1A



WHEN FLASHING IS TRIMMED WITH AN  
OVERHANG - SCREWS ARE INSERTED FROM  
THE SIDE

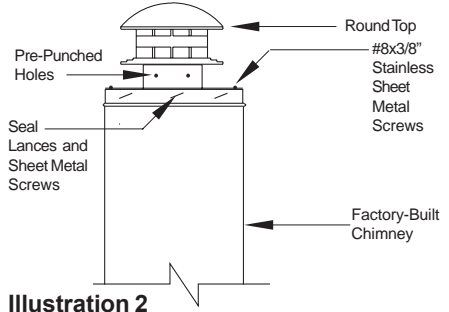


Illustration 2

3. As an alternative to step 2, to have an overhang, the flashing/support is trimmed approximately 2" larger in diameter than the marked outline (see Ill. 1a). It is then slit and folded to fit down over the chimney. The screws are installed from the side once it is siliconed in place as per step 6.

4. Lower the flexible liner down through the factory-built chimney to the desired position.

5. Place a wide bead of high temperature silicone along the entire top surface of the factory-built chimney.

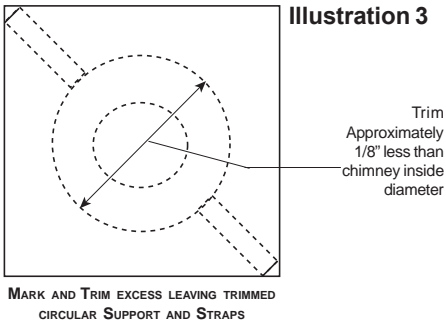
6. Place the trimmed Flashing/Support over the Flexible Liner. Lower the Flashing/Support so that the plate comes to rest on the factory-built chimney. Press the plate firmly into the silicone to create a good seal and secure into place with #8 x 3/8" stainless sheet metal screws as per Ill. 1a or 2.

7. Slide the Liner Round Top and the Flexible Liner back through the Flashing/Support assembly until the skirt of the Round Top comes in contact with the collar of the Flashing/Support. Install the four (4) sheet metal screws (provided) using the pre-punched holes in the flashing collar and through the flex and Round Top. Apply silicone sealant to any exposed lances, holes or screws.

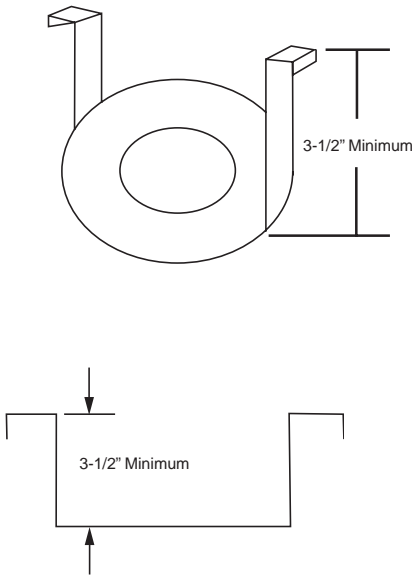
**Method B**  
**Flexible Liner w/existing Chimney Cap**

1. Remove the existing Chimney Cap and set aside.

2. Using the Flashing/Support, cut out a pattern approximately 1/8" less than the chimney inside diameter to be used as a support as per Ill. 3.

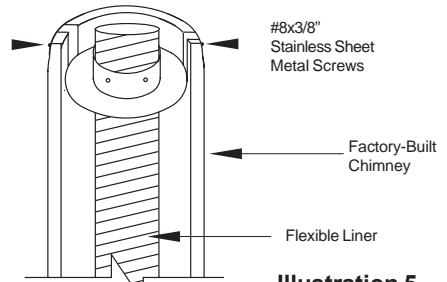


3. Bend and form as per Ill. 4.



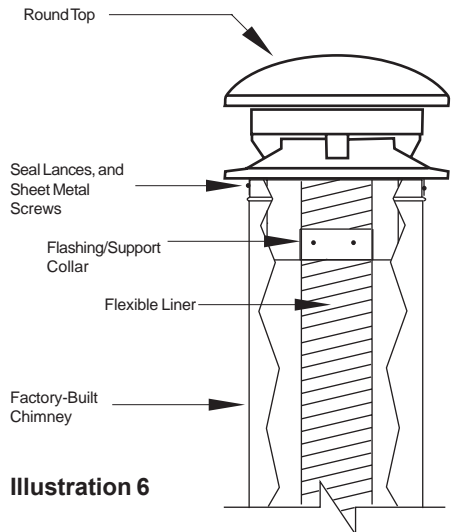
**Illustration 4**

4. Lower the Flexible Liner through the factory-built chimney to the desired position.



**Illustration 5**  
 CUTAWAY VIEW OF SUPPORT INSTALLED  
 WITH FLEX PROTRUDING THROUGH

5. Install the support by placing it over the Flexible Liner and securing it into place through the Flashing/Support collar. Make sure that a minimum of 5" of Flexible Liner is above the plate (see Ill. 5).



**Illustration 6**  
 CUTAWAY VIEW OF COMPLETED SYSTEM  
 WITH CHIMNEY TOP REINSTALLED

6. Insert the Flexible liner and the Flashing/Support into the factory-built chimney. Secure the straps with 2 #8x3/8" sheet stainless sheet metal screws. Apply silicone sealant to any exposed lances, holes or screws.

7. Re-install the existing chimney cap.

## 11.0 MORTAR GUARD INSTALLATION

Back at the appliance, if you have not done so previously, slide the Mortar Guard over the end of the Flexible Liner protruding from the prepared opening. Position the Mortar Guard within the prepared opening such that it will provide a protective barrier between the Liner and any required filler material (refer to section 13.0). Ensure the end of the mortar Guard with the Listing Label attached extends into the room a minimum of 2" so that the label is visible for inspection.

## 12.0 APPLIANCE CONNECTION

Final connection of the flexible liner to the appliance may be made in a number of ways and will depend on specific conditions.

### Type "B" Vent Connector

If Type "B" Vent is recommended as a connector (if clearances to combustibles or sizing guidelines suggest) the Flexible Liner should extend at least 2" (50mm) beyond the Mortar Guard. Slide either an Inlet Coupler (USA) or a Reverse Draft Hood

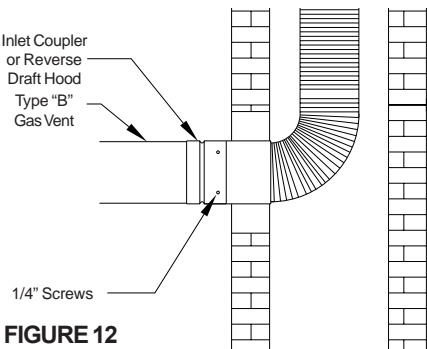


FIGURE 12

Draft Hood Connector (CDA) onto or into the Flexible Liner and secure into place with four (4) evenly spaced screws through the Mortar Guard and into the Flexible Liner and Vent Connector (see Figure 12).

### Single Wall Vent Connector

Trim the Flexible Liner flush with the Mortar Guard. Insert the end of the single wall vent connector (not supplied) into the Flexible Liner. Secure into place with four (4) evenly spaced screws through the Mortar Guard and into the Flexible Liner and the vent connector (see Figure 13).

When used as a single wall vent connector and if it is acceptable, the Flexible Liner system may be extended all the way to the appliances and installed with 1" (25mm) airspace clearance to combustibles. Remember to include a minimum of 1/4" per foot rise in any horizontal sections (from the appliance to the chimney) and keep turns to a minimum (see Figure 2).

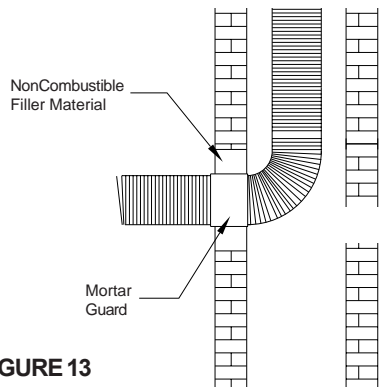


FIGURE 13

## 13.0 INSTALLATION COMPLETION

After the appliance is correctly positioned, all the venting connections are completed and checked for proper installation (clearances to combustibles, proper support and component parts), fill the void area around the penetration hole with mortar. High temperature ceramic sealant, or other non combustible filler material may be used as a substitute instead of mortar.

Upon completion of the installation fill in the information below and keep in a safe place for future reference.

Chimney Model: \_\_\_\_\_

Installation Date: \_\_\_\_\_

Dealer Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, Province/State: \_\_\_\_\_

Technician`s Name: \_\_\_\_\_

Technician`s  
Certification Number: \_\_\_\_\_

Address: \_\_\_\_\_

City, Province/State: \_\_\_\_\_

## 14.0 FINAL INSPECTION

Ensure all gas piping, electrical, and vent connections are complete and up to code requirements. After adjusting the appliance and lighting the main burner, allow a couple of minutes for warm up. Check the vent operation by holding a lighted match or smoking material just under the rim of the draft hood relief opening. Proper venting will draw the flame or smoke into the draft hood. Improper venting, indicated by escape or spillage of burned gas will cause smoke to move away from the draft hood and a flame to flicker or go out.

## 15.0 MAINTENANCE OF THE LINER

The Flexible Liner should be inspected by a qualified heating or chimney technician before each heating season to ensure it is free of debris and condensation and that all components are in good condition. This can be accomplished by removing the vent connector and looking into the liner at its base.

The Round Top can be removed for inspection purposes by removing the fastening screws. Again, have it inspected by a qualified heating or chimney technician.

**WARNING:  
THIS ALUMINUM LINER IS  
NOT INTENDED FOR SOLID  
OR LIQUID FUEL BURNING  
APPLIANCES!**

# LIMITED LIFETIME WARRANTY

## Selkirk Chimney & Venting Products

Selkirk Canada Corporation, ("Selkirk", "we", "us", "our") warrants Selkirk products\* to be free from defects in material and workmanship for as long as the original consumer owns the system. For products installed after January 1, 2000, for a period of Ten (10) years from original installation, we will provide replacement product with a similar or like quality of available Selkirk product, **free of charge** excluding any installation costs. From the Eleventh (11) through Fifteenth (15) years we will provide replacement product to the original consumer at a cost of 75% off the published Retail Price in effect on the date the claim is received excluding any installation costs. At expiration of the Fifteen (15) year term, we will provide replacement product to the original consumer at a cost of 50% off the published Retail Price in effect on the date the claim is received excluding any installation costs.

\* additional coverage applies to Model CF Chimney

### LIMITATIONS:

- Products must be installed for their intended purpose and in accordance with current Selkirk installation instructions.
- Products must be connected to an appliance listed with an accredited testing laboratory.

**WARNING: FAILURE TO INSTALL SELKIRK PRODUCTS ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WILL VOID ALL APPLICABLE WARRANTIES AND MAY RESULT IN FIRE, CARBON MONOXIDE POISONING OR DEATH. SEE OUR SELKIRK INSTALLATION INSTRUCTIONS FOR COMPLETE INSTALLATION PROCEDURES.**

### WARRANTY COVERAGE:

This warranty covers any substantial defects in material and workmanship in normal use that are found to exist in any of the insulated chimney sections or component parts of your chimney with the exception stated below.

### THIS WARRANTY DOES NOT COVER:

- (a) any non-stainless base tee unit mounted or connected to an Insulated Chimney system;
- (b) **costs (labor or otherwise \*\*) associated with either removing a previously installed product, installing a replacement product, transportation or return of a product, or transportation of replacement product;**
- (c) damage to the finish of products caused by the use of improper solvents/chemicals or improper cleaning methods;
- (d) damage resulting from failure to reasonably clean, care for or maintain products in accordance with our installation instructions/recommendations;
- (e) damage (to products, appliances or structure on
- or resulting from improper installation or repair, misuse or abuse (including, but not limited to, excessive or improper operating condition), or alteration or adjustment other than in conformity with our installation instructions and specifications, whether performed by a contractor, service company, technician, or yourself;
- (f) any products that have been moved from their original installation site.
- (g) damage caused by burning driftwood, garbage, or any other prohibitive material which has been burned in the appliance served by the chimney
- (h) damage that results from accidents such as fire, flood, high winds, "acts of God", or any other contingency beyond our control.

**\*\* Due to the wide variance in installation practices and other conditions beyond our control, we do not guarantee or in any way warrant the installation of Chimney and Venting products.**

### CLAIM PROCEDURE:

If you believe that a product is defective, notify us in writing at the following location:

#### SELKIRK CANADA CORPORATION

P.O. Box 526, Depot 1,  
Hamilton, Ontario, Canada , L8L 7X6  
ATTN: WARRANTY CLAIMS DEPARTMENT  
905-662-6600, 800-263-9308, Fax: 905-662-5352  
www.selkirkcanada.com

#### SELKIRK LLC

ATTN: WARRANTY CLAIMS  
14081 Quorum Dr., Dallas, Texas 75240  
800-992-VENT (8368),  
Toll Free Fax 877- 393-4145  
www.selkirkinc.com

Notification should include a description of the product, model and serial number (if applicable) and a description of the product defect. Upon receipt of a written claim under this limited warranty and evidence of the date of purchase or installation, at our option and in our sole discretion, we will provide replacement product with similar or like quality of available Selkirk product excluding any installation costs. Selkirk Canada Corporation reserves the right to inspect or investigate any warranty claims prior to determining whether to provide replacement product. If, as determined by Selkirk Canada Corporation, repair or replacement of the product is not commercially practicable or cannot be completed in a timely manner, we may refund the purchase price paid for the product, prorated to the terms of this warranty, upon verification by providing a copy of your invoice or receipt of bill of sale.

Selkirk products covered under this warranty:

model AFCL, ALT, DSP, DWC, DWS, FC (JSC), QC, RV, SC (JM), SFCL, SL, SPR, SSII, SS PLUS, ST, UT, VP, WV